



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/511,137

08/22/2005

Yuuichirou Ogawa

121506

8749

25944

7590

10/17/2007

OLIFF & BERRIDGE, PLC

P.O. BOX 320850

ALEXANDRIA, VA 22320-4850

EXAMINER

FISCHER, JUSTIN R

ART UNIT

PAPER NUMBER

1791

MAIL DATE

DELIVERY MODE

10/17/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/511,137

Applicant(s)

OGAWA, YUUICHIROU

Examiner

Justin R. Fischer

Art Unit

1791

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 September 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 8 and 11 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The claims as currently amended require a combination of a split bead core arrangement and a stiffener rubber. However, the original disclosure only provides support for including a stiffener rubber in a tire construction having a single bead construction (see Page 4 of original disclosure). It is particularly noted that previously drafted claim 8 was dependent from claim 1 and the split bead core construction was not introduced until claim 2. As such, the amended claim language is not supported by the original disclosure and thus constitutes new matter.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-7, 9, 10, and 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ogawa (JP 2000-71722- English equivalent US 6,929,045) and further in view of Cottrell US 2005/0230021) and Ueyoko (US 6,079,467). As best depicted in Figures 1 and 2, Ogawa discloses a tire construction having a carcass including a continuous cord and having a plurality of radial cord portions (e.g. 5C) and a plurality of circumferential cord portions (e.g. E). The reference is only devoid of a runflat insert in the sidewall region of the tire. Cottrell is similarly directed to a non-conventional carcass structure (one formed of individual cords, as opposed to calendered plies) and suggests the inclusion of an insert at the interior side of said carcass in order to provide tire operation in an underinflated condition (Paragraphs 3 and 4). It is further emphasized that runflat inserts represent a well known and conventionally included rubber layer in tire constructions for the reasons detailed above. As such, one of ordinary skill in the art at the time of the invention would have found it obvious to include a runflat insert in the tire of Ogawa.

Lastly, with respect to the independent claim, the bead core of Ogawa is generally depicted as being directly adjacent the tire bead base. Based on this depiction, one of ordinary skill in the art at the time of the invention would have expected the bead core to be positioned within the broad range of the claimed invention, it being further noted that the claimed dimensions are absolute values and it is well recognized that dimensions of tire components vary as a function of the type of tire and thus tire size being manufactured. Ueyoko has been additionally applied to evidence the general dimension between the bead reinforcement structure and the

Art Unit: 1791

bead base (Column 5, Lines 40-50 and Table 1). In this instance, the distance between the innermost carcass structure and the bead seat is between 1 and 6 times the carcass cord diameter, which falls within the broad range of the claimed invention for a majority of tire constructions (tires with carcass cord larger than 0.85 mm are rare). Ueyoko specifically states that the distance is below 6 times the carcass cord diameter in order to maintain the engaging force between the bead and the rim. It is further noted that the distance between the carcass reinforcement and the bead base and the bead core and the bead base are extremely similar to one another. Thus, one of ordinary skill in the art at the time of the invention would have found it obvious to form the tire of Ogawa with a spacing not more than 5 mm, more preferably not more than 3 mm. Lastly, applicant has not provided a conclusive showing of unexpected results to establish a criticality for the claimed spacing (all examples in Table 1 have a spacing in accordance to the claimed invention).

Regarding claim 2, Ogawa depicts an embodiment comprising a pair of split bead cores (4i and 4o), wherein the circumferential cord portions E are below the radially outer surface of the bead cores. Also, Figure 9 of Ogawa (JP '722) clearly depicts an overlap portion in the bead portion.

With respect to claim 3, the claim is directed to the method of forming the bead and does not further define the structure of the claimed tire article.

Regarding claims 5 and 6, Ogawa teaches a radial carcass formed of at least one continuous cord (Column 3, Lines 45-50)- one of ordinary skill in the art at the time of the invention would have found it obvious to form the carcass of Ogawa from 3 cords

Art Unit: 1791

and thus form 3 cord layers absent any conclusive showing of unexpected results. Additionally, one would expect a triple contact portion in an analogous manner to the double contact portion depicted in Figure 9.

With respect to claim 7, Figures 1 and 2 clearly depict a carcass having at least one cord layer folded around the split bead core from an axially inner position to an axially outer position.

As to claims 9 and 10, the turnup end can be relatively low (Figure 4) or relatively high (Figure 5), which appear to satisfy the limitations of the respective claims.

Regarding claim 12, while the figures of Ogawa generally depict the circumferential cord portions as having the same radial height, the claim only requires that the respective heights are different. One of ordinary skill in the art at the time of the invention would not have expected the radial heights of the relevant cord portions to be identical (e.g. at microscopic level). It is emphasized that the claims do not require a quantitative relationship between the respective heights- the claims only require that the respective heights differ, even if it is only an extremely small distance. Lastly, applicant has not provided a conclusive showing of unexpected results to establish a criticality for the claimed arrangement.

As to claim 13, the contact portions of Ogawa are in the bead region.

With respect to claim 14, the limitations define the conventional tire components and tire manufacturing methods. One of ordinary skill in the art at the time of the invention would have found it obvious to form the tire of Ogawa in accordance to the method of the claimed invention. While Ogawa fails to expressly depict an innerliner, it

Art Unit: 1791

is well recognized that innerliners represent a fundamental component of modern day tubeless tires- one example of such a construction is Cottrell (Paragraph 4).

***Response to Arguments***

5. Applicant's arguments with respect to claims 1-14 have been considered but are moot in view of the new ground(s) of rejection.

Applicant argues that Ogawa is silent as to the claimed spacing between the bead core and the bead base. In response to this argument, the examiner has cited Ueyoko, which identifies the benefits of having a small spacing between the innermost carcass reinforcement structure and the bead base. One of ordinary skill in the art at the time of the invention would have recognized such a disclosure as rendering the claimed spacing obvious. In particular, the dimensions between the bead core and the bead base and the innermost carcass reinforcement structure and the bead base are extremely similar to one another (carcass wrapped directly around bead core). Thus, in order to maintain a strong engaging force between the rim and the bead, one of ordinary skill in the art at the time of the invention would have found it obvious to form the tire of Ogawa with the claimed spacing. Lastly, it is noted that applicant describes the claimed spacing as providing the identical benefit (Page 10, Lines 6-9).

As to the purported benefits and the results of Table 1, applicant has not provided a conclusive showing of unexpected results to establish a criticality for the claimed spacing. In particular, all of the examples in Table 1 (including the comparative examples) have a spacing that is not more than 5 mm. Applicant has not compared the inventive tire construction to one in which the spacing between the bead core and the

bead base was outside the claimed range. It is further noted that Table 1 does not provide a conclusive showing of unexpected results for a spacing not more than 3 mm (Examples 3 and 4 have multiple parameters that are varied, as compared to Examples 1 and 2, and thus any realized benefits cannot be attributed solely to a spacing of not more than 3 mm).

### ***Conclusion***

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Justin R. Fischer whose telephone number is (571) 272-1215. The examiner can normally be reached on M-F (7:30-4:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

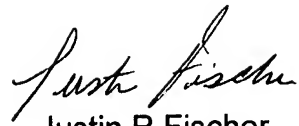
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Application/Control Number: 10/511,137

Page 8

Art Unit: 1791

A handwritten signature in black ink, appearing to read "Justin R Fischer". The signature is written in a cursive, flowing style.

Justin R Fischer  
Primary Examiner  
Art Unit 1791

JRF

October 5, 2007